REMARKS

Claims 23-121 are all the claims pending in the application. Claims 69-121 have been withdrawn from consideration.

Claims 23-68 are rejected under 35 U.S.C. § 112, first paragraph, for allegedly failing to comply with the written description requirement. In rejecting claims 23-68 under 35 U.S.C. § 112, first paragraph, the Examiner states: "All of the independent claims recite the capability of satellite communication, but the original disclosure does not recite or imply satellite communication." Applicant submits that two types of signals are described in the specification: VSB signals and QAM signals. It was specifically described in the specification that VSB signals can be used in over-the-air broadcasting systems, over-the-air narrowcasting systems and cable systems (page 1, lines 12-15), and that QAM signals can be used in cable systems (page 1, lines 15-17). Applicant submits that the disclosed signals could also be used for satellite mode. That is, one of ordinary skill in this art would have recognized that the disclosed signals could be used for satellite transmission.

Independent claims 23, 24, 53, 54, and 62-67, and claims 25, 26, 38 and 43:

The Examiner has given additional reasons for rejecting independent claims 23, 24, 53, 54, and 62-67, as well as dependent claims 25, 26, 38 and 43. Specifically, the Examiner states that these claims:

> "all recite an 'adaptive decoder', 'adaptive trellis decoder' or 'adaptively decoding', but applicants do not have an adaptive decoder or disclose an adaptive decoding process. Applicants have two separate decoders respectively dedicated to VSB and QAM

> formats. There is no adaptability of either decoder. Applicants select between their decoders because they both perform specifically different decoding processes. Stewart, on the other hand, has an adaptive decoder 50 as part of overall decoder 12".

Applicant submits, however, that selection between coding formats for decoding in response to the detection signal produced by the VSB PILOT CARRIER PRESENCE DETECTOR 34 (Fig. 1) constitutes adaptive decoding. That is, a different decoding result is output depending on the detection signal. This means that the decoding result is adapted to the detection signal, thus having the overall effect of adaptive decoding. The type of decoded output is determined by the detection signal. A general dictionary definition of "adapt" is: "To adjust to a specified use or situation." Clearly, Applicants' decoding function fits this definition.

As far as the concept of adaptive decoding is concerned, the operation of Applicants' decoding is similar to Stewart's. Stewart teaches that decoder 12 is an adaptive decoding network incorporating different types of decoding functions which are selected by microcontroller 105 (col. 2, lines 61-64). This is similar to Applicants' adaptive decoding network where different types of decoding functions are selected from according to the detection signal.

Dependent claims 32 and 55:

The Examiner has given additional reasons for rejecting dependent claims 32 and 55. More specifically, the Examiner states the "differential decoder" is not inherent.

MPEP §2163.02 describes the standard for complying with the written description requirement as follows:

> The courts have described the essential question to be addressed in a description requirement issue in a variety of ways. An objective standard for determining compliance with the written description requirement is, "does the description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed." *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). Under *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991), to satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed. The test for sufficiency of support in a parent application is whether the disclosure of the application relied upon "reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter." *Ralston Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983)).

It was generally known at the time the application was filed that a decision directed carrier recovery suffers from a phase ambiguity in the derived carrier, and that this phase ambiguity was overcome by using a differential decoder. Textbooks generally referred to using a differential encoder/decoder to solve the problem of phase ambiguity. (See, e.g., Digital Communication, by Edward A. Lee and David G. Messerschmitt, Kluwer Academic Publishers, 1988, pages 552-553.) The inclusion of differential decoding was a matter of course for QAM signals. A person of ordinary skill in the art would have recognized that differential decoding would have been utilized for the QAM signals.

Discussion of Other Matters Raised in the Office Action

In section number 4 of the Office Action, the Examiner raises what he calls "other matters.":

> First, the Examiner states that "applicants' '**means for** processing the data...' recited in claims 37 and 39, when considered under sixth paragraph of 35 USC 112, does not do the same processing as Stewart's. Applicants' means for processing involves VSB and QAM whereas Stewart processes QPSK and QAM data."

Applicant requests that the Examiner hold in abeyance the discussion of how the "means for processing" should be construed relative to Stewart.

Second, the Examiner states: "Another salient point is that applicants' decoding is not a '*a function of a code rate selected from a plurality of code rates*' like Stewart's is. Applicants' decoding (which is not adaptive) is selected based on pilot carrier presence or absence."

Applicant submits that selection of different code rates is not a patentable distinction. In the art of digital communications, changing code rates to adapt to varying channel conditions is an old and well known technique. For example, United States Patent No. 5,438,590 to Tzukerman et al discloses a satellite television broadcast system which adaptively decodes a received signal having a code rate selected from a plurality of code rates.

Third, the Examiner states: "Another considerable difference, contrary to what applicants assert, is that applicants do not bypass 'an adaptive decoder' whereas Stewart does."

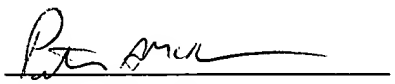
Applicant submits that Applicants did not assert that Applicants bypass an adaptive decoder. Rather, Applicants asserted that bypassing of one of many decoders in a digital receiver is a predictable feature in the context of a multiple format system. Typically, digital

communications utilize a number of coding schemes layered over one another. In the multiple format context, one or more of the formats may not require a particular coding scheme which is used in other formats. In other words, the simplest way an adaptive decoder might adapt itself is to take itself out of the signal stream completely if it is not needed for a given format. In any case, this difference would have been plainly obvious to a skilled artisan in this art, and, thus, is not an independently patentable feature.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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